

REMARKS

Reconsideration of the application is requested.

Claims 1-21 remain in the application. Claims 1-21 are subject to examination. Claims 1 and 21 have been amended.

Under the heading "Claim Rejections - 35 USC § 102" on pages 2-3 of the above-identified Office Action, claims 1, 2, 9, 10, 11, 14 and 21 have been rejected as being fully anticipated by U.S. Patent No. 5,220,572 to Kawaguchi (hereinafter Kawaguchi) under 35 U.S.C. § 102.

The rejection has been noted and claims 1 and 21 have been amended in an effort to even more clearly define the invention of the instant application. Amended claims 1 and 21 contain the additional features that the active zone is subdivided in such a way that higher modes of the resonator experience a smaller amplification per resonator circulation than the fundamental mode of the resonator. Support for the changes is found on page 3, lines 8-20 of the specification of the instant application.

Kawaguchi, in Fig. 3, discloses a light pulse generator containing a first semiconductor laser diode 11 having at one end a highly reflective surface 11a and a second semiconductor laser diode 12 having at one end a highly reflective surface

12a. An optical resonator is formed from the two highly reflective surfaces and two lenses 13. In contrast to the invention of the instant application, Kawaguchi neither mentions different resonator modes, nor does Kawaguchi teach that the active zone is subdivided in such a way that higher modes of the resonator experience a smaller amplification per resonator circulation than the fundamental mode of the resonator.

In contrast to the invention of the instant application, the teaching of Kawaguchi does not refer to transversal modes.

In item 3 on pages 3-4 of the Office Action, claims 1, 2, 12, and 16 have been rejected as being fully anticipated by International Patent Disclosure WO 97/30495 to Scobey et al. (hereinafter Scobey) under 35 U.S.C. § 102.

The same arguments mentioned above in regards to Kawaguchi equally apply to Scobey. The optical device illustrated in Fig. 7 of Scobey contains two diode lasers 58, 68, wherein a resonator cavity is established between two coatings (see page 22, lines 4-21). The amplification of a fundamental mode is not described. Scobey does not disclose a configuration where transversal modes of a higher order are suppressed by adapting the free-radiation regions.

It is an object of the invention of the instant application to provide a device for the emission of laser radiation of high power with a good beam quality. This can be achieved for example by suppressing transversal modes of a higher order, which is realized according to the invention of the instant application by subdividing the active zone in such a way that higher modes of the resonator experience a smaller amplification per resonator circulation than the fundamental mode of the resonator.

Kawaguchi discloses a light pulse generator intended to produce a series of short-width light pulses with high peak power (see column 1, lines 53-54). This can be achieved by providing the two laser diodes with two different currents having a phase difference from each other. The currents repeat at intervals depending on the duration required for light to travel one cycle within the optical resonator. Thus, there is a relationship between the length of the optical resonator or the distance between the laser diodes and the frequency of the currents. However, a person of average skill in the art does not get any hint that the distance between the laser diodes is related to the amplification of the fundamental mode.

The optical device disclosed by Scobey is intended to have good wavelength stability and accuracy (see page 4, lines 13-

15). This can be achieved by use of a special prism assembly wherein the longitudinal modes are important, which is in contrast to the invention of the instant application, where the transversal modes are relevant. A person of average skill in the art cannot derive from Scobey how to configure the distance between the diode lasers, particularly how to configure the distance by free-radiation regions in such a way that modes of higher order experience a smaller amplification per resonator circulation than the fundamental mode of the resonator.

Furthermore, a person of average skill in the art would not come up with the invention of the instant application by combining the teachings of Kawaguchi and Scobey, because, following these teachings, he/she would focus on the parameters "pulse width" and "spectral line width, but not on the parameters "beam quality" or "beam diameter".

Under the heading "Claim Rejections - 35 USC § 103" on pages 4-9 of the above-identified Office Action, claims 3-8, 13, 15, and 17-20 have been rejected as being obvious over different combinations of U.S. Patent Nos. 5,220,572, 6,263,002, 5,136,598, 6,580,850 and/or Scobey under 35 U.S.C. § 103.

Amended claim 1 is believed to be allowable. As claims 3-8, 13, 15 and 17-20 ultimately depend on amended claim 1, they are also believed to be allowable.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 21. Claims 1 and 21 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

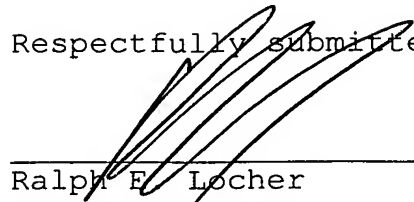
In view of the foregoing, reconsideration and allowance of claims 1-21 are solicited.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner Greenberg Stemer, LLP, No. 12-1099.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner

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Respectfully submitted,



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